

REMARKS

I. Status of Claims

Claims 1, 3-5, 12 and 14-16 are amended to clearly describe the presently claimed invention, with support in the present specification as follows. Support for passing a process gas through a non-discharge space is at, for example, the paragraph bridging pages 25 and 26 of the specification. Support for passing the gas to be discharge through a discharge space having two opposite electrodes is at, for example, page 24, line 18 to page 25, line 3 of the specification. Support for emission of process gases towards the substrate is at, for example, page 25, lines 16 and 17 of the specification. Support for the pressure value is at page 17, lines 1-4 of the specification. See also, Figs. 1, 2, 6, 9, 13, 19 and 20 of the specification.

Claims 6-8, 10, 11, 17-23, 25 and 30 are amended to correct antecedent basis, and correctly recite claim dependency.

Claims 2 and 13 are canceled without prejudice or disclaimer. Claim 9 was previously canceled.

No new matter is added, and the amendments places the application in better form for appeal and in condition for allowance. Accordingly, Applicants respectfully request entry and consideration of the Amendment after final. Upon entry of the Amendment, claims 1, 3-8, 10-12 and 14-30 will be pending.

II. Response to Claim Objection

Claims 10-11, 25, 26, 28 and 29 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only.

Claims 10, 11 and 25 are amended to correctly claim multiple dependency in the alternative. Therefore, the objection to claims 10, 11 and 25 is overcome. The objection to claims 26, 28 and 29 is also overcome, at least by virtue of their dependence from claim 25.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection.

III. Response to Claim Rejections Under 35 U.S.C. § 112

Claim 30 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Claim 30 is amended to correct the preamble and dependency. Therefore, the § 112 rejection of the claim is overcome.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 30.

IV. Response to Claim Rejections Under 35 U.S.C. § 103

A. Claims 1-7, 10-21, 23-26, 28 and 30 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ikeda (U.S. Patent No. 5,593,741) in view of Jain et al. (U.S. Patent No. 6,465,044)

Without acquiescing to the merits, claims 2 and 13 are canceled.

Applicants respectfully submit that claims 1, 3-5, 12 and 14-16, and any claims dependent thereof, are patentable over the combination of Ikeda and Jain, at least for the following reasons.

The present invention relates to the chemical vapor deposition (CVD) under the pressure close to the atmospheric pressure, i.e., a claimed pressure of 1.0×10^4 to 11.0×10^4 Pa. Therefore, a substrate is placed in atmospheric pressure. Moreover, in the presently claimed invention, a pair

of opposite electrodes 11 and 12, which defines discharge space 1, is arranged on both sides of the non-discharge space 2, as described in Figs. 1, 2, 6, 9, 13, 19 and 20 of the specification. The process gas (B), which is discharge processed, is emitted from both sides of the process gas (A), which is not discharge processed. Therefore, the process gas (A), i.e., the raw gas cannot escape and is activated more effectively.

In comparison, Ikeda relates to low pressure plasma chemical vapor deposition (CVD), performed at pressures of 0.1 to tens of Torr. Therefore, a substrate is placed in a reaction chamber which is under vacuum. Jain relates to normal pressure heat CVD, and thus, mixed process gases are not discharge processed and only sprayed on the surface of a substrate. Furthermore, neither Ikeda nor Jain discloses that opposite electrodes are arranged on both sides of the non-discharge space, as presently claimed.

In view of the above, claims 1, 3-5, 12 and 14-16, and any claims dependent thereof are patentable over the combination of Ikeda and Jain. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of claims 1, 3-7, 10-12, 14-21, 23-26, 28 and 30.

B. Claim 8 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ikeda and Jain as applied to claims 1-7, 10-21, 23-26, 28, and further in view of Nguyen et al. (U.S. Patent No. 6,489,255);

C. Claim 22 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ikeda and Jain as applied to claims 1-7, 10-21, 23-26, 28, 30, and further in view of Fonash et al. (U.S. Patent Application Publication No. 2002/0094388); and,

D. Claim 29 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ikeda and Jain as applied to claims 1-7, 10-21, 23-26, 28, 30, and further in view of Bang et al. (U.S. Patent No. 6,110,556).

Claims 8, 22 and 29 are patentable over the combination of Ikeda and Jain, and in further view of Nguyen, Fonash and Bang, respectively, at least by virtue of their dependence from claim 1. Moreover, none of Nguyen, Fonash or Bang, cures the above discussed deficiencies in the combination of Ikeda and Jain with respect to claims 1, 3-5, 12 and 14-16.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejections of claims 8, 22 and 29.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

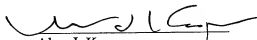
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